REMARKS

In the final Office Action, the Examiner rejected claims 39, 41, 44-53, 56-61, and 64-66 under 35 U.S.C. § 103(a) as unpatentable over Arthurs (U.S. Patent No. 6,591,261) in view of Pant et al. (U.S. Patent No. 6,012,053); and rejected claims 42, 43, 54, 55, 62, and 63 under 35 U.S.C. § 103(a) as unpatentable over Arthurs in view of Pant et al. and Page (U.S. Patent No. 6,285,999).

Applicants traverse the rejections. Claims 39 and 41-66 remain pending.

REJECTION UNDER 35 U.S.C. § 103 BASED ON ARTHURS AND PANT ET AL.

In paragraph 5 of the final Office Action, the Examiner rejected claims 39, 41, 44-53, 56-61, and 64-66 under 35 U.S.C. § 103(a) as allegedly unpatentable over Arthurs in view of Pant et al. Applicants traverse the rejection.

Independent claim 39, for example, is directed to a computer-implemented method that comprises identifying a document that is stored on a server in a network and that includes links to linked documents; determining scores for a plurality of the links in the identified document; modifying the identified document based on the determined scores, where the modifying includes reordering at least two of the links based on the determined scores or sorting at least two of the links based on the determined scores; and providing the modified document to a user.

Neither Arthurs nor Pant et al., whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 39. For example, Arthurs and Pant et al. do not disclose or suggest determining scores for a plurality of links in an identified document that is stored on a server in a network. The Examiner alleged that Arthurs discloses this feature and cited column 6, line 19 - column 7, line 3, of Arthurs for support (final Office

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Action, page 3).   Applicants submit that the disclosure of <u>Arthurs</u> provides no support for the

Examiner's allegation.

At column 6, line 19 - column 7, line 3, <u>Arthurs</u> discloses:

In addition to the association database, a content database is created to store sites' content
(as opposed to the association database that is used to determine a site's relationship to
other sites) as illustrated in FIG. 4. The content database typically includes information
relating to the content of a web page. Specifically, the words residing within the web
pages that have been uncovered during the spidering process, and the pages on which
those words reside are stored in the database at step 30. Relevance is determined based on
the frequency and location that a word resides on a web page, and is subsequently stored
in the content database at step 32. The title and description of each web page is further
stored in the content database at step 34. It is to be understood that the association and content
databases may be implemented by any conventional or other databases or storage
structures, and may include any type of information.

Once the association and content databases are created, the search engine processes search
requests and provides results as illustrated, by way of example only, in FIG. 5.
Specifically, the server computer system spiders the Web at step 40, and creates the
association and content databases as described above at step 42. The Web is spidered at
predetermined time intervals (e.g., continuously, hourly, daily, etc.) to continually refresh
the association and content databases. An end-user typically visits, via the end-user
computer system and corresponding browser, a search engine web site residing on the
server computer system to enter a search query at step 44, preferably in the form of a word
or phrase. The search engine accesses the content database at step 46 to find sites having a
title and description matching the word or phrase. An initial ranking of sites is determined
using word or phrase relevance as described above. Once the ranked sites are identified,
the association database is accessed at step 48 to find web sites corresponding to the
identified sites that are considered to be related because of their frequency of being linked
to or from common web pages.

Each web site of the search results (e.g., the web sites identified by the content database)
is retrieved at step 50, and relationships between that site and other sites in the search
results are determined at step 52 from information stored in the association database. The
weight or score for the retrieved web site is adjusted at step 54 based upon the relationship
values in the association database for each determined relationship for that site. In other
words, each relationship identified for the retrieved site increments the weighting of the
score. When each of the search result web sites have been processed as determined at step
56, the search results are ranked in accordance with their score and displayed at the end-
user computer system at step 58. The web sites attaining the greatest scores are displayed
ahead of the other web sites.

In this section, <u>Arthurs</u> discloses that a search engine, in response to a received search query,

accesses a content database to find web sites that match the search query and ranks the web sites

using word or phrase relevance to form search results. Arthurs also discloses adjusting the

weight or score for a web site, corresponding to a search result, based on relationship values in an

association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document that

includes links to linked documents. Applicants submit that the list of search results is not <u>an</u>

<u>identified document that is stored on a server in a network</u>, as required by claim 39. In other

words, nowhere does <u>Arthurs</u> disclose or remotely suggest <u>identifying</u> the list of search results

that is stored on a server in a network, as required by claim 39.

When addressing this feature of claim 39, the Examiner did not point to the list of search

results as a document that is stored on a server in a network that includes links to linked

documents, but instead pointed to web pages that are encountered by a spidering program (final

Office Action, page 3). Nowhere does <u>Arthurs</u> disclose or remotely suggest that this spidering

program encounters a list of search results. Further, nowhere does <u>Arthurs</u> disclose or remotely

suggest determining scores for a plurality of the links in the web pages encountered by the

spidering program.

Therefore, <u>Arthurs</u> does not disclose or remotely suggest determining scores for a

plurality of links in an identified document that is stored on a server in a network, as required by

claim 39. <u>Pant et al.</u> also does not disclose or suggest this feature of claim 39.

<u>Arthurs</u> and <u>Pant et al.</u> also do not disclose or suggest modifying the identified document

based on the determined scores, where the modifying includes reordering at least two of the links

in the identified document based on the determined scores, or sorting at least two of the links in

the identified document based on the determined scores, as further recited in claim 39.

The Examiner admitted that <u>Arthurs</u> does not disclose or suggest these features, but

alleged that <u>Pant et al.</u> discloses these features and cited column 2, lines 25-43, and column 3,

lines 56-63, of <u>Pant et al.</u> for support (final Office Action, page 3). Applicants submit that the

disclosure of <u>Pant et al.</u> provides no support for the Examiner's allegation.

At column 2, lines 25-43, <u>Pant et al.</u> discloses:

> Accordingly, one aspect of the present invention is a computer system for providing user-controllable relevance ranking of search results from a query on a collection of items of information. The computer system includes a relevance determination module having a first input for receiving a set of search results from a query indicating items in the collection matching the query, a second input for receiving an indication of relevance factors specified by a user, and a third input for receiving information about the items in the set of search results to which relevance factors may be applied. This module has an output for providing an indication of a score indicative of relevance for each of the items in the set of search results. A sorting module has an input which receives the score associated with each item and an indication of the set of search results, and an output providing to the user an indication of the items in the set of search results in an order ranked according to the relevance score of each item.

In this section, <u>Pant et al.</u> discloses a relevance determination module that provides a score

indicative of the relevance of each item in a set of search results and a sorting module that ranks

the items based on their relevance scores. Applicants submit that the relevance determination

module and the sorting module are not operating upon links in an identified document that is

stored on a server in a network, but instead are operating upon items in a set of search results.

These search results are <u>not</u> an identified document that is stored on a server in a network, as

required by claim 39. <u>Pant et al.</u> specifically discloses that the search results are not formed into

an HTML document until after the search results are scored and ranked (col. 5, line 61 - col. 6,

line 15). Therefore, <u>Pant et al.</u> does not disclose or suggest modifying <u>the identified document</u>

based on the determined scores, where the modifying includes reordering <u>at least two of the links</u>

in the identified document based on the determined scores, or sorting at least two of the links in

the identified document based on the determined scores, as required by claim 39.

At column 3, lines 56-63, Pant et al. discloses:

> Another embodiment is shown in FIG. 2. In this computer system 130, the search results
> 110 do not include a score with each item. Therefore, the relevance determination module
> 128 outputs scores 124 separately for each item in the search results. Both the search
> results 110 and the list of scores 124 are used by the sorting module 124 to produce
> ranked results for the user. The embodiment is otherwise the same as shown in FIG. 1.

In this section, Pant et al. discloses a relevance determination module that outputs scores

separately for each item in the search results. Applicants submit that the relevance determination

module is not operating upon links in an identified document that is stored on a server in a

network, but instead is operating upon items in a set of search results. Pant et al. specifically

discloses that the search results are not formed into an HTML document until after the search

results are scored and ranked (col. 5, line 61 - col. 6, line 15). Therefore, Pant et al. does not

disclose or suggest modifying the identified document based on the determined scores, where the

modifying includes reordering at least two of the links in the identified document based on the

determined scores, or sorting at least two of the links in the identified document based on the

determined scores, as required by claim 39.

For at least these reasons, Applicants submit that claim 39 is patentable over Arthurs and

Pant et al., whether taken alone or in any reasonable combination. Claims 41 and 44-46 depend

from claim 39 and are, therefore, patentable over Arthurs and Pant et al. for at least the reasons

given with regard to claim 39.

Independent claim 47 is directed to a computer-implemented method that comprises

receiving a search query; providing a list of search results in response to the search query;

receiving selection of one of the search results in the list of search results; identifying links in a

document corresponding to the selected search result; determining a score for one of the links

based on a degree of match between the search query and a content of a linked document pointed

to by the one of the links; modifying the document based on the determined score for the one of

the links; and providing the modified document.

Neither Arthurs nor Pant et al., whether taken alone or in any reasonable combination,

discloses or suggests the combination of features recited in claim 47. For example, Arthurs and

Pant et al. do not disclose or suggest determining a score for one of the links in a document

corresponding to a selected search result based on a degree of match between the search query

and a content of a linked document pointed to by the one of the links.

The Examiner alleged that Arthurs discloses these features and cited column 6, line 19 -

column 7, line 3, of Arthurs for support (final Office Action, page 8). Applicants submit that the

disclosure of Arthurs provides no support for the Examiner's allegation.

Column 6, line 19 - column 7, line 3, of Arthurs is reproduced above. In this section,

Arthurs discloses that a search engine, in response to a received search query, accesses a content

database to find web sites that match the search query and ranks the web sites using word or

phrase relevance to form search results. Arthurs also discloses adjusting the weight or score for a

web site, corresponding to a search result, based on relationship values in an association database

for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document

corresponding to a selected search result. Applicants submit that this is an unreasonable

interpretation of Arthurs. The list of search results is not a document corresponding to a selected

search result, as required by claim 47.

When addressing this feature of claim 47, the Examiner did not point to the list of search results as a document corresponding to a selected search result, but instead pointed to a web site that is retrieved and displayed by selecting a link (final Office Action, page 8). Nowhere does Arthurs disclose or remotely suggest determining a score for a link in this web site, let alone determining the score based on a degree of match between a search query and a content of a linked document pointed to by the link. Thus, Arthurs does not disclose or remotely suggest determining a score for one of the links in a document corresponding to a selected search result based on a degree of match between the search query and a content of a linked document pointed to by the one of the links, as required by claim 47. Pant et al. also does not disclose or suggest these features of claim 47.

For at least these reasons, Applicants submit that claim 47 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination. Claims 48-51 depend from claim 47 and are, therefore, patentable over Arthurs and Pant et al. for at least the reasons given with regard to claim 47.

Independent claim 52 is directed to a computer-implemented method that comprises identifying a document that is stored on a server in a network and that includes links to linked documents; determining scores for a plurality of the links in the identified document; comparing the determined scores to a threshold; deleting one of the plurality of links from the identified document when the score for the one of the links falls below the threshold; and providing, to a user, the identified document without the deleted link.

Initially, Applicants submit that the Examiner's rejection of claim 52 is improper. The

Examiner rejected claim 52 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Arthurs</u> and

<u>Pant et al.</u> In the body of the rejection, however, the Examiner alleged that <u>Arthurs</u> discloses all

of the features of the claim. The Examiner did not rely on any portion of <u>Pant et al.</u> and did not

provide a motivation statement for combining the disclosures of <u>Arthurs</u> and <u>Pant et al.</u> Thus,

the Examiner's rejection is improper and the Examiner did not establish a prima facie case of

obviousness based on <u>Arthurs</u> and <u>Pant et al.</u>

     Nevertheless, neither <u>Arthurs</u> nor <u>Pant et al.</u>, whether taken alone or in any reasonable

combination, discloses or suggests the combination of features recited in claim 52. For example,

<u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest determining scores for a plurality of links in an

identified document that is stored on a server in a network.

     The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 6, line 19 -

column 7, line 3, of <u>Arthurs</u> for support (final Office Action, page 13).   Applicants submit that

the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation for at least reasons

similar to the reasons given with regard to claim 39.

     <u>Arthurs</u> and <u>Pant et al.</u> also do not disclose or suggest deleting one of the plurality of links

from an identified document that is stored on a server in a network when the score for the one of

the links falls below a threshold, as further recited in claim 52.

     The Examiner alleged that <u>Arthurs</u> discloses the concept of comparing scores to a

threshold and an association database that may utilize threshold values to remove data from the

database and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of

<u>Arthurs</u> for support (final Office Action, page 13). Regardless of the accuracy of the Examiner's

allegations, <u>Arthurs</u> does not disclose or remotely suggest deleting one of the plurality of links

from an identified document that is stored on a server in a network when the score for the one of

the links falls below a threshold, as required by claim 52.

At column 2, lines 14-23, <u>Arthurs</u> discloses:

> Upon "spidering" the Web (e.g., traversing substantially the entire Web by following links
> between web pages), groupings of web sites can be determined by setting threshold values
> for sites that are linked by common web sites. The greater the quantity of common links in
> a grouping and the closer the proximity of the links to one another, the closer the
> relationship between the grouping of sites. A statistically accurate assumption can be made
> as to validity of a grouping of sites by setting threshold values for the quantity of common
> links. The present invention combines the rated index of the content of a web site with the
> correlation of links to other sites to provide a logical grouping of related sites and
> enhanced search engine ranking capability. Further, the present invention enhances the
> results by indicating the closest groupings to the desired topic and iteratively refining the
> search results.

In this section, <u>Arthurs</u> discloses using threshold values for the quantity of common links to

group web sites. While this section mentions the word "threshold," nowhere in this section, or

elsewhere does <u>Arthurs</u> disclose or remotely suggest deleting a link, let alone deleting one of the

plurality of links from an identified document that is stored on a server in a network when the

score for the one of the links falls below a threshold, as required by claim 52.

At column 6, lines 5-16, <u>Arthurs</u> discloses:

> Accordingly, the association database is pared or culled to contain only those associations
> of sites that are deemed to meet or exceed a particular threshold. The value of the
> threshold varies depending upon the convention used to determine association or
> relationship values or, more particularly, upon the number of associations determined for a
> given site and the overall total number of associations. The association database may
> preserve associations based on various criteria, such as an association or relationship value
> exceeding some predetermined threshold, a particular number of associations for each
> entry or some other technique or combination of techniques.

In this section, <u>Arthurs</u> discloses that the association database contains only those associations of

sites that are deemed to meet or exceed a threshold. While this section mentions the word

"threshold," nowhere in this section, or elsewhere, does <u>Arthurs</u> disclose or remotely suggest

deleting a link, let alone deleting one of the plurality of links from an identified document that is stored on a server in a network when the score for the one of the links falls below a threshold, as required by claim 52.

At column 10, lines 34-36, Arthurs discloses "The association database may utilize any threshold values or schemes based on any stored data to remove data from the database." While this section mentions the word "threshold," nowhere in this section, or elsewhere does Arthurs disclose or remotely suggest deleting a link, let alone deleting one of the plurality of links from an identified document that is stored on a server in a network when the score for the one of the links falls below a threshold, as required by claim 52.

The Examiner also alleged that it would have been obvious to one of ordinary skill to modify Arthurs to delete one of the links from the identified document when the determined score for the one of the links falls below the threshold (final Office Action, page 13). Applicants submit that this allegation lacks merit and falls short of establishing a prima facie case of obviousness with regard to claim 52. The burden is on the Examiner to explain how and why one having ordinary skill in the art would have been led to modify an applied reference and/or combine applied references to arrive at the claimed invention. The Examiner has not met this burden.

For at least these reasons, Applicants submit that claim 52 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination. Claims 53 and 56-58 depend from claim 52 and are, therefore, patentable over Arthurs and Pant et al. for at least the reasons given with regard to claim 52.

Independent claim 59 is directed to a system that comprises means for identifying a

document based on an address associated with the document, the document including links that point to linked documents; means for determining scores for a plurality of the links in the identified document; means for comparing the determined scores to a threshold; means for determining that a score for one of the plurality of links is greater than the threshold; means for determining additional information regarding the linked document pointed to by the one of the plurality of links; and means for providing the identified document with the additional information to a user.

Initially, Applicants submit that the Examiner's rejection of claim 59 is improper. The Examiner rejected claim 59 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Arthurs</u> and <u>Pant et al.</u> In the body of the rejection, however, the Examiner alleged that <u>Arthurs</u> discloses all of the features of the claim. The Examiner did not rely on any portion of <u>Pant et al.</u> and did not provide a motivation statement for combining the alleged disclosures of <u>Arthurs</u> and <u>Pant et al.</u> Thus, the Examiner's rejection is improper and the Examiner did not establish a prima facie case of obviousness based on <u>Arthurs</u> and <u>Pant et al.</u>

Nevertheless, neither <u>Arthurs</u> nor <u>Pant et al.</u>, whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 59. For example, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest means for determining scores for a plurality of the links in a document identified based on an address associated with the document. The Examiner alleged that <u>Arthurs</u> discloses this feature and cited column 6, line 19 - column 7, line 3, of <u>Arthurs</u> for support (final Office Action, page 15).   Applicants submit that the disclosure of <u>Arthurs</u> provides no support for the Examiner's allegation.

Column 6, line 19 - column 7, line 3, of <u>Arthurs</u> is reproduced above. In this section,

<u>Arthurs</u> discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. <u>Arthurs</u> also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document that includes links to linked documents. Applicants submit that the list of search results is not <u>a</u> <u>document that is identified based on an address associated with the document</u>, as required by claim 59. In other words, nowhere does <u>Arthurs</u> disclose or remotely suggest <u>identifying</u> the list of search results based on an address associated with the list of search results, as required by claim 59.

When addressing this feature of claim 59, the Examiner did not point to the list of search results as a document that is identified based on an address associated with the document, but instead pointed to web pages that are encountered by a spidering program (final Office Action, page 15). Nowhere does <u>Arthurs</u> disclose or remotely suggest that this spidering program encounters a list of search results. Further, nowhere does <u>Arthurs</u> disclose or remotely suggest determining scores for a plurality of the links in the web pages encountered by the spidering program.

Therefore, <u>Arthurs</u> does not disclose or remotely suggest means for determining scores for a plurality of the links in a document identified based on an address associated with the document, as required by claim 59. <u>Pant et al.</u> also does not disclose or suggest this feature of claim 59.

Arthurs and Pant et al. also do not disclose or suggest means for providing the identified document with additional information regarding the linked document pointed to by the one of the plurality of links to a user, as further recited in claim 59.

The Examiner alleged that Arthurs discloses these features and cited column 2, lines 14-23, and column 6, line 5 - column 7, line 3, of Arthurs for support (final Office Action, page 16). Applicants submit that the disclosure of Arthurs provides no support for the Examiner's allegation.

Column 2, lines 14-23, of Arthurs is reproduced above. In this section, Arthurs discloses using threshold values for the quantity of common links to group web sites. Nowhere in this section, or elsewhere does Arthurs disclose or remotely suggest means for providing the identified document with additional information regarding the linked document pointed to by the one of the plurality of links to a user, as required by claim 59.

At column 6, line 5 - column 7, line 3, Arthurs discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. Arthurs also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site. Nowhere in this section, or elsewhere, does Arthurs disclose or remotely suggest means for providing the identified document with additional information regarding the linked document pointed to by the one of the plurality of links to a user, as required by claim 59.

For at least these reasons, Applicants submit that claim 59 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination. Claims 60 and 64-66 depend

from claim 59 and are, therefore, patentable over <u>Arthurs</u> and <u>Pant et al.</u> for at least the reasons given with regard to claim 59.

Accordingly, Applicants request reconsideration and withdrawal of the rejection of claims 39, 41, 44-53, 56-61, and 64-66 under 35 U.S.C. § 103 based on <u>Arthurs</u> and <u>Pant et al.</u>

REJECTION UNDER 35 U.S.C. § 103 BASED ON <u>ARTHURS</u>, <u>PANT ET AL.</u>, AND <u>PAGE</u>

In paragraph 7 of the final Office Action, the Examiner rejected claims 42, 43, 54, 55, 62, and 63 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Arthurs</u>, <u>Pant et al.</u>, and <u>Page</u>. Applicants traverse the rejection.

Claims 42 and 43 depend from claim 39, claims 54 and 55 depend from claim 52, and claims 62 and 63 depend from claim 59. Without acquiescing in the Examiner's rejections with regard to claims 42, 43, 54, 55, 62, and 63, Applicants submit that the disclosure of <u>Page</u> does not cure the deficiencies in the disclosures of <u>Arthurs</u> and <u>Pant et al.</u> identified above with regard to claims 39, 52, and 59. Therefore, claims 42, 43, 54, 55, 62, and 63 are patentable over <u>Arthurs</u>, <u>Pant et al.</u> and <u>Page</u>, whether taken alone or in any reasonable combination.

Accordingly, Applicants request reconsideration and withdrawal of the rejection of claims 42, 43, 54, 55, 62, and 63 under 35 U.S.C. § 103 based on <u>Arthurs</u>, <u>Pant et al.</u>, and <u>Page</u>.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of the pending claims.

As Applicants' remarks with respect to the Examiner's rejections overcome the rejections, Applicants' silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior

art, motivation to combine references, assertions regarding dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to dispute these assertions/requirements in the future.

If the Examiner believes that the application is not now in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned to discuss any outstanding issues.

To the extent necessary, a petition for an extension of time under 35 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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